



Claims

1. Bonding machine for lamellar pieces of wood to be joined to a board, comprising at least one clamping and pressing device and comprising at least one drive,
characterized in that the clamping device (3) has at least two pressing members (27) which can be loaded independently of one another against the board (12) by a pressure force.
2. Bonding machine according to claim 1,
characterized in that the pressing members (27) extend parallel to the pieces of wood (2) and transversely to the feeding direction (8) of the board (12).
3. Bonding machine according to claim 1,
characterized in that the pressing members (27) are adjustable by piston-cylinder units (16b) as drives.
4. Bonding machine, in particular according to claim 1,
characterized in that the clamping device (3) has heating elements (9a) relative to which the pressing members (27) are movable transversely to the board (12) to a limited extent.
5. Bonding machine according to claim 4,
characterized in that the heating elements (9a) are tubes through which a heating medium flows.
6. Bonding machine according to claim 5,
characterized in that the heating medium is water, thermal oil, steam, and the

like.

7. Bonding machine according to claim 5,
characterized in that a supply line (18) and a return line (19) for the heating
medium are connected to the heating elements (9a).
8. Bonding machine according to claim 7,
characterized in that the supply lines (18) of the heating elements (9a) are
connected to a common supply conduit (20).
9. Bonding machine according to claim 7,
characterized in that the return lines (19) of the heating elements (9a) are
connected to a common return conduit (21).
10. Bonding machine according to claim 5,
characterized in that the heating medium is circulated.
11. Bonding machine according to claim 5,
characterized in that the heating elements (9a) are partially enclosed by an
insulation (29).
12. Bonding machine according to claim 4,
characterized in that the heating elements (9a) are electrodes.
13. Bonding machine according to claim 4,
characterized in that the heating elements (9a) extends parallel to one
another.

14. Bonding machine according to claim 4,
characterized in that the heating elements (9a) extend in the feeding
direction (8) of the board (12).
15. Bonding machine according to claim 4,
characterized in that the heating elements (9a) are fastened to a common
support (26, 37).
16. Bonding machine according to claim 15,
characterized in that the support is comprised of two connecting plates (26,
37) which extend transversely to the feeding direction (8) of the board (12)
and to which are fastened the ends of the heating elements (9a).
17. Bonding machine according to claim 15,
characterized in that the support (26, 37) has through openings for coupling
members (36, 40) which are connected with the piston-cylinder units (16a,
16b).
18. Bonding machine according to claim 17,
characterized in that the coupling members (36) positioned at the outlet side
of the pressing device (3) connect the piston-cylinder units (16b) with the
pressing members (27).
19. Bonding machine according to claim 17,
characterized in that the coupling member (36) is movable to a limited extent
relative to the support (37) and the heating elements (9a) transversely to the
plane of the board (12).

20. Bonding machine according to claim 1,
characterized in that the pressing member (27) extends across the area of
at least two adjacently positioned heating elements (9a).
21. Bonding machine according to claim 17,
characterized in that the pressing members (27) are positioned at the outlet
side of the pressing device (3) in front of the heating elements (9a).
22. Bonding machine according to claim 1,
characterized in that the heating elements are fastened on the support (26)
and are provided for receiving tensile forces in the feeding direction (8).
23. Bonding machine according to claim 22,
characterized in that in front of each heating element (9a) noses are
positioned.
24. Bonding machine according to claim 22,
characterized in that the noses (28) are positioned at the inlet side of the
clamping device (3) in front of the heating elements (9a).
25. Bonding machine, in particular according to claim 1,
characterized in that the clamping device (3) has at least one pressing slide
(13) with which the pressing power is applied onto the pieces of wood (2) of
the board (12).
26. Bonding machine according to claim 25,
characterized in that the pressing slide (13) can be adjusted from a lowered
position into a working position by means of at least one lifting device (14).

27. Bonding machine according to claim 26,
characterized in that the pressing slide (13) in the lowered position forms a support for the pieces of wood (2) during insertion into the pressing device (3).
28. Bonding machine according to claim 25,
characterized in that the pressing slide (13) is provided with cutouts into which the noses (28) penetrate.
29. Bonding machine according to claim 25,
characterized in that the pressing slide (13) is arranged on at least one height-adjustable carriage (14).
30. Bonding machine according to claim 29,
characterized in that the pressing slide (13) is movable transversely to the movement direction of the carriage (14), moves absolutely parallel and applies the pressure onto the pieces of wood (2).
31. Bonding machine according to claim 25,
characterized in that the pressing slide (13) extends across the length of the pieces of wood (2) of the board (12).
32. Bonding machine according to claim 1,
characterized in that the clamping device (3) has an insertion device (1) arranged upstream thereof.
33. Bonding machine according to claim 32,
characterized in that the feeding device (1) has at least one holding-down

device (6, 7) for the pieces of wood (2) of the board (12).

34. Bonding machine according to claim 33,
characterized in that the holding-down device (6, 7) is adjustable in the
direction of height.
35. Bonding machine according to claim 32,
characterized in that the pieces of wood (2) can be combined to the board
(12) in the feeding device (1).
36. Bonding machine according to claim 32,
characterized in that the holding-down device (6, 7) has at least two holding-
down elements arranged successively in the transport direction (8) of the
pieces of wood (2).
37. Bonding machine according to claim 36,
characterized in that the holding-down elements (6, 7) are height-adjustable
independent from one another.
38. Bonding machine according to claim 36,
characterized in that the forwardly positioned holding-down element (7) in the
transport direction (8) of the pieces of wood (2) is height-adjustable together
with the carriage (14).
39. Bonding machine according to claim 36,
characterized in that the forwardly positioned holding-down element (7) in the
transport direction (8) of the pieces of wood (2) is height-adjustable relative
to the pressing slide (13) and to the carriage (14).

40. Bonding machine according to claim 32,
characterized in that the feeding device (1) is provided with at least one slide
(11) for the board (12).
41. Bonding machine according to claim 32,
characterized in that a pressure bed is positioned on the bonded board (12)
which, upon insertion of a new board, forms a friction element against the
force of the slide (11).
42. Bonding machine according to claim 32,
characterized in that the feeding device (1) has arranged upstream thereof
a coating station for an adhesive with which one of the longitudinal sides of
the pieces of wood (2) can be coated with an adhesive.
43. Bonding machine according to claim 42,
characterized in that the longitudinal side of the pieces of wood (2) can be
coated with an adhesive during their transported into the feeding device (1).
44. Bonding machine according to claim 1,
characterized in that the pressing device (3) has a support (10) for the board
(12).
45. Bonding machine, in particular according to claim 44,
characterized in that the support (10) is comprised of at least two support
parts (10a).
46. Bonding machine according to claim 45,
characterized in that the support parts (10a) are heating members.

47. Bonding machine according to claim 46,
characterized in that the support parts (10a) are formed as tubes through
which the heating medium flows.
48. Bonding machine according to claim 46,
characterized in that a supply line (22) and a return line (23) for the heating
medium are connected to the support parts (10a).
49. Bonding machine according to claim 48,
characterized in that the supply lines (22) of the support parts (10a) have a
common supply conduit (24).
50. Bonding machine according to claim 48,
characterized in that the return lines (23) of the support parts (10a) are
connected to a common return conduit (25).
51. Bonding machine according to claim 47,
characterized in that the heating medium is circulated.
52. Bonding machine according to claim 47,
characterized in that the support parts (10a) are partially enclosed by an
insulation (29).
53. Bonding machine according to claim 46,
characterized in that the support parts (10a) are electrodes which extend
transversely to the pieces of wood (2) of the board (12).
54. Bonding machine, in particular according to claim 1,

characterized in that the lower heating elements (10a) are fastened on a frame (17) and receive tensile forces in the insertion direction (8).

55. Method for pressing lamellar pieces of wood to boards, wherein at least one longitudinal side of the pieces of wood is coated with an adhesive and wherein the pieces of wood resting against one another with their adhesive-coated longitudinal sides are pressed,
characterized in that the pressing power is exerted against a brake pressure exerted transversely thereto onto the board (12).
56. Method according to claim 55,
characterized in that the board (12) is pushed into the pressing device against a brake force acting onto the board (12) to be pushed out.
57. Method according to claim 55,
characterized in that the individual lamellar pieces of wood (2) upon insertion into the pressing device are pressed underneath and past the noses (28) and are aligned thereby vertically before the horizontal pressing force is applied.
58. Method according to claim 55,
characterized in that the board (12), before pressing, is secured in the clamping device (3) by a holding-down pressure.
59. Method according to claim 55,
characterized in that the pressed board (12) after pressing is pushed out of the clamping device (3) by a board (12) to be pressed.
60. Method according to claim 55,

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